

**Patterson Schafer, Incorporated**



Environmental  
Consultants

January 13, 1989

Chief  
Compliance Section (5WQC-TUB-8)  
United States Environmental  
Protection Agency  
230 South Dearborn Street  
Chicago, Illinois 60604

Chief  
Compliance Assurance Section  
Illinois Environmental  
Protection Agency  
2200 Churchill Road  
Springfield, Illinois 62706

RE: Cerro Copper Products Company  
Pretreatment Regulations  
Order Pursuant to 33 U.S.C. Section 1319(a)  
Docket No. V-W-87-AO-42  
Docket No. V-W-88-AO-01

Dear Sirs:

This letter report is submitted pursuant to the terms of the above referenced administrative orders issued to Cerro Copper Products Company ("Cerro"). It is the quarterly Periodic Compliance Report of monthly monitoring activities in October, November and December, 1988. The report is accompanied by supporting documentation of the field and analytical results for the monitoring conducted each month by Sverdrup Corporation, St. Louis, Missouri, at Cerro's plant in Sauget, Illinois. The three documents are titled "Field Sampling Report PCR Monitoring", for October, November and December (respectively), 1988.

The results of the field monitoring and analytical programs have been reduced to mass discharge figures for regulated pollutants for each major subcategorical area of the plant, for each month, as shown in the attached exhibits A, B, and C for October, November and December, respectively. The discharge allowances shown are based on plant historical production data evaluated and reflected as mass limitations in Mr. Sutfin's letters dated November 10, 1988 and December 21, 1988 to Mr. Tandler of Cerro. Please also note our letter of December 22, 1988 to Mr. Sutfin, responding on behalf of Cerro and requesting consideration of several matters relevant to his letter of November 10.

All of the plant effluent data shown in the Exhibits are in "pounds per day" except for pretreated effluent from Metal Molding and Casting, which is "pounds per batch." The mass discharge values for total phenols and for oil and grease were calculated using flow weighted data, as instructed.

C06364

Cerro Copper Products Company  
January 13, 1989  
Page 2

Flow measurements and samples were taken in accordance with the Administrative Orders as required, and are described in further detail in the accompanying "Field Sampling Reports" mentioned above.

In accordance with Mr. Sutfin's letter dated November 10, 1988. Copper Forming (Extrusion) is calculated as the East Outfall (12C) less Secondary Copper (8A) except that when 8A exceeds 12C, the 12C value is attributed entirely to 8A, and Copper Forming (Extrusion) is reported as Zero, as was the case for Lead in October and December. (Exhibits A and C)

Metals values (Cu, Zn, Ni) reported attributable by difference to the Copper Forming (extrusion) area continue questionable. There is no process based technical explanation for significant amounts of Nickel or Zinc in the extrusion process wastewaters, or the levels of Copper calculated. Sewer cross connections between the Secondary Copper process area and the East Outfall (effectively bypassing 8A) are a possible explanation, and are being investigated in the extrusion area. In any event, the metals values attributed to the extrusion process are not considered representative of wastewaters from that area.

Pretreatment facilities for wastewater from the Copper Molding and Casting operations were placed on stream on October 31, 1988, in compliance with the effective date of the relevant and applicable categorical standard. Values reported for November and December therefore reflect performance of the new pretreatment system. As agreed, lift station 9A is also reported, but separately in Table 1 as a non-regulated stream.

Metal Molding and Casting is well within discharge limitations. This will, of course, be the subject of the 90 day compliance report required under the General Pretreatment regulations at 40 CFR 403, due by January 30, 1989, per Mr. Sutfin's letter of December 21, 1988.

The effects of aggressive plant efforts to reduce water usage in the Metal Molding and Casting area are evident. Where flows at lift station 9A before the program had typically averaged 50 gpm or more, equivalent rates were reduced to 2-5 gpm at 9A and 6000 gallons every other day via the pretreatment system (about 2 gpm average), a reduction of 85-90%. Further, the sludge produced by pretreatment will be reclaimed for its metal values.

C06365

Cerro Copper Products Company  
January 13, 1989  
Page 3

Flows reported at 9A for the December monitoring period averaged 12 gpm due to non-process water bleeds to the sewer established to prevent pipe and equipment freeze up and damage. Despite the increase from 3 gpm average in November to 12 gpm average in December, the copper content is reduced from 0.85 lbs during the November monitoring period to 0.15 lbs during the December monitoring period. This may be attributable to the sewer segment being flushed clean in the absence of process wastewaters, especially blowdown from the air pollution scrubber.

Further monitoring at lift station 9 would seem unnecessary in view of these data, and permission to discontinue it is requested.


Also, in accordance with Mr. Sutfin's letter of September 15, 1988, TTO values for the 3rd quarterly PCR are reported here, in Table 2. Because partial data for the 4th quarterly PCR were available, and in order to show the trend, TTO's are also reported for October and November. The December values will be reported with the next quarterly report.

TTO emissions show continued improvement, reflecting plant control efforts, especially in the Piercing Mill area (3B). The value reported for July is regarded as an anomaly and not reflective of plant performance. The large negative value for Extrusion reflects the Piercing Mill value by balance as then calculated, and is meaningless.

Composite samples were obtained in December by two methods for comparison. This report reflects grab based composite data, consistent with past practice. Continuous flow proportional composite samplers were also taken and analyzed, as shown in the Field Data Report for December. Additional comparative data will be collected during the January monitoring and evaluated.

Please call if you have any questions.

Cordially,



Carl J. Schafer

CJS/mh  
880060.2

cc: Mr. Conreux, Cerro Copper Products  
Mr. Tandler, Cerro Copper Products ✓  
Mr. Silverstein, Cerro Copper Products  
Mr. Kissel, Gardner, Carton and Douglas (w/encl)  
Ms. Franzetti, Gardner, Carton and Douglas  
Dr. Patterson, Patterson Schafer, Inc.  
Mr. Schillinger, American Bottoms Regional Treatment  
Facility (w/encl)

C06366

## EXHIBIT A

PCR DATA-CERRO/SAUGET  
OCTOBER 25-26, 1988

|       | <u>Metal Molding<br/>Casting (9A)</u> |              | <u>Secondary<br/>Copper (8A)</u> |              | <u>Copper Forming<br/>Piercing (3B)</u> |              | <u>Extrusion</u> |              |
|-------|---------------------------------------|--------------|----------------------------------|--------------|---|--------------|------------------|--------------|
|       | <u>Actual</u>                         | <u>Limit</u> | <u>Actual</u>                    | <u>Limit</u> | <u>Actual</u>                           | <u>Limit</u> | <u>Actual</u>    | <u>Limit</u> |
| Cu    | 111.55                                | 1.513        | 206.37                           | 0            | 0.11                                    | 0.338        | 190.34           | 1.395        |
| Pb    | 6.20                                  | 1.043        | 30.52                            | 0            | 0.02                                    | 0.026        | 0.               | 0.109        |
| Zn    | 10.53                                 | 1.495        | 141.88                           | 0            | 0.03                                    | 0.259        | 80.89            | 1.071        |
| Phen  | 0.012                                 | 0.085        | 0.12                             | 0            | NR                                      | 0.115        | 0.03             | NR           |
| TTO   | 0.0                                   | 0.225        | 0.0                              | 0            |   |              |                  |              |
| O&G   | 1.86                                  | 2.937        | 10.96                            | 0            | 1.17                                    | 3.558        | 721.43           | 14.692       |
| Cr    |                                       | NR           | 0.64                             | 0            | 0.02                                    | 0.078        | 0.46             | 0.330        |
| Ni    |                                       | NR           | 167.68                           | 0            | 0.01                                    | 0.341        | 198.52           | 1.409        |
| Prod. | 406,113                               |              | 406,087                          |              | 0                                       |              | 875,000          |              |

## Notes:

Limit values are daily maximum limits (lb/d)  
based on historical production figures per Mr. Sutfins  
letter of November 10, 1988.

NR = Not regulated for this category.

Phen = Total phenols (4 AAP)

## EXHIBIT B

PCR DATA-CERRO/SAUGET  
NOVEMBER 22-23, 1988

|       | Metal Molding<br>Casting */** |              | Secondary<br>Copper (8A) |              | Copper Forming |              |               |              |
|-------|-------------------------------|--------------|--------------------------|--------------|----------------|--------------|---------------|--------------|
|       |                               |              |                          |              | Piercing (3B)  |              | Extrusion     |              |
|       | <u>Actual</u>                 | <u>Limit</u> | <u>Actual</u>            | <u>Limit</u> | <u>Actual</u>  | <u>Limit</u> | <u>Actual</u> | <u>Limit</u> |
| Cu    | 0.025                         | 3.026        | 56.17                    | 0            | 0.11           | 0.338        | 28.59         | 1.395        |
| Pb    | 0.010                         | 2.086        | 13.22                    | 0            | 0.02           | 0.026        | 4.99          | 0.109        |
| Zn    | 0.0                           | 2.990        | 62.77                    | 0            | 0.04           | 0.259        | 47.11         | 1.071        |
| Phen  | -                             | 0.170        | 0.01                     | 0            | NR             |              | NR            |              |
| TTO   | 0.0                           | 0.450        | 0.0                      | 0            | 0.20           | 0.115        | 0.10          | 0.476        |
| O&G   | -                             | 5.584        | 38.54                    | 0            | 1.81           | 3.558        | 250.28        | 14.692       |
| Cr    |                               | NR           | 0.24                     | 0            | 0.06           | 0.078        | 0.26          | 0.330        |
| Ni    |                               | NR           | 63.87                    | 0            | 0.01           | 0.341        | 46.01         | 1.409        |
| Prod. | 1,241,833                     |              | 426,998                  |              | 0              |              | 857,000       |              |

## Notes:

Limitations for Copper Forming are daily maximum limits (lb/d) based on historical production figures per Mr. Sutfin's letter of November 10, 1988.

NR = Not regulated for this category

Phen = Total phenols (4 AAP)

\* Limitations for Metal Molding and Casting are batch discharge limits, lbs/batch, for pretreatment plant operation, per Mr. Stufins letter of December 21, 1988.

\*\* The Sverdrup data indicates sample #6 is for the pretreatment plant. However, this sample was obtained from the treatment tank itself, rather than from the treated effluent. Hence these values are not representative of a batch discharge. The values shown are from tabulated plant laboratory data taken during batch discharges. (Attachment A)

Analyses for total phenols and oil and grease are not routinely performed in the plant.

## EXHIBIT C

PCR DATA-CERRO/SAUGET  
DECEMBER 6-7, 1988

| <u>Metal Molding<br/>Casting *</u> |              |       | <u>Secondary<br/>Copper (8A)</u> |              | <u>Copper Forming</u> |              |                  |              |
|------------------------------------|--------------|-------|----------------------------------|--------------|-----------------------|--------------|------------------|--------------|
|                                    |              |       |                                  |              | <u>Piercing (3B)</u>  |              | <u>Extrusion</u> |              |
| <u>Actual</u>                      | <u>Limit</u> |       | <u>Actual</u>                    | <u>Limit</u> | <u>Actual</u>         | <u>Limit</u> | <u>Actual</u>    | <u>Limit</u> |
| Cu                                 | 0.26         | 3.026 | 167.61                           | 0            | 0.10                  | 0.338        | 130.03           | 1.395        |
| Pb                                 | 0.021        | 2.086 | 63.25                            | 0            | 0.0                   | 0.026        | 0.0              | 0.109        |
| Zn                                 | 0.004        | 2.990 | 112.12                           | 0            | 0.02                  | 0.259        | 136.86           | 1.071        |
| Phen                               | 0.001        | 0.170 | .023                             | 0            |                       | 0            |                  | 0            |
| TTO                                | **           | 0.45  | **                               | 0            | **                    | 0.115        | **               | 0.476        |
| O&G                                | 1.20         | 5.584 | 64.61                            | 0            | 9.18                  | 3.558        | 119.66           | 14.692       |
| Cr                                 |              | NR    | 0.49                             | 0            | 0.01                  | 0.078        | 0.28             | 0.330        |
| Ni                                 |              | NR    | 9.93                             | 0            | 0.0                   | 0.341        | 51.60            | 1.409        |
| Prod. 940,212                      |              |       | 427,103                          |              | 0                     |              | 969,000          |              |

## Notes:

Limitations for Copper Forming are daily maximum limits (lb/d) based on historical production figures per Mr. Sutfin's letter of November 10, 1988.

NR = Not regulated for this category

Phen = Total phenols (4 AAP)

\* Limitations for Metal Molding and Casting are batch discharge limits, lbs/batch, for pretreatment plant operation, per Mr. Stufins letter of December 21, 1988.

\*\* To be reported in next quarterly report, per Mr. Sutfin's letter of September 15, 1988.

Table 1

Mass discharge (lbs/d) at  
Lift Station 9A

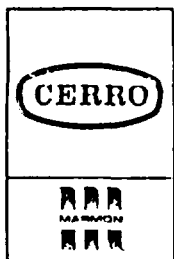
|      | <u>NOV 22-23, 1988</u> | <u>DEC 6-7, 1988</u> |
|------|------------------------|----------------------|
| Cu   | 0.85                   | 0.15                 |
| Pb   | 0.10                   | 0.0                  |
| Zn   | 0.18                   | 0.01                 |
| Phen | 0.0                    | 0.0                  |
| TTO  | 0.0                    | 0.0                  |
| O&G  | 4.23                   | 6.23                 |

TABLE 2

PCR DATA-CERRO/SAUGET  
 TOTAL TOXIC ORGANICS  
 3rd Quarter 1988

|     | <u>Metal Molding<br/>Casting (9A)</u> |              | <u>Secondary<br/>Copper (8A)</u> |              | <u>Copper Forming<br/>Piercing (3B)</u> |              | <u>Extrusion</u> |              |
|-----|---------------------------------------|--------------|----------------------------------|--------------|---|--------------|------------------|--------------|
|     | <u>Actual</u>                         | <u>Limit</u> | <u>Actual</u>                    | <u>Limit</u> | <u>Actual</u>                           | <u>Limit</u> | <u>Actual</u>    | <u>Limit</u> |
| JUL | 0.052                                 | 0.225        | 0.73                             | 0            | 57.49                                   | 0.115        | -47.86           | 0.476        |
| AUG | 0.033                                 | 0.225        | 0.09                             | 0            | 2.36                                    | 0.115        | - 0.10           | 0.476        |
| SEP | 0.0                                   | 0.225        | 0.25                             | 0            | 1.04                                    | 0.115        | 0.04             | 0.476        |
| OCT | 0.0                                   | 0.225        | 0.0                              | 0            | 0.34                                    | 0.115        | 0.03             | 0.476        |
| NOV | 0.0                                   | 0.225        | 0.0                              | 0            | 0.20                                    | 0.115        | 0.10             | 0.476        |



**CERRO COPPER PRODUCTS CO.**

A member of The Marmon Group of companies

P.O. Box 681

East St. Louis, Illinois 62202

618/337-6000

**RECEIVED****DEC 26 1988**

PATTERSON SCHAFFER, INC.

December 21, 1988

Mr. Carl Schafer  
Patterson Schafer Inc.  
39 S. LaSalle Street, Suite 917  
Chicago, IL 60603

Dear Carl:

The PCR sampling report for November 1988, which we recently received from Sverdrup includes an analysis identified as Sample No. 8 which cross references to "pretreatment plant". November 1988 was the first month during which the pretreatment facility at our Billet Casting operation was on stream and we had previously agreed that starting in November 1988 we would add a sample collected from that facility to obviate the use of the CWF in determining compliance with the Metal Molding and Casting Category Regulations. Since the pretreatment is a batch operation it was determined that a single sample would be drawn from the known volume of water to be discharged from the batch on the sample date.

On the day the samples were taken, November 22, one batch had been discharged by the treatment facility prior to the time the sampling crew arrived, and it was then decided to draw a sample from a full tank that was undergoing treatment at the time. Since that batch had not been given the full period of time for settlement and sludge had not been withdrawn from it, the sample drawn is not representative of the discharge to the sewer. It is obvious therefore that Sample No. 8 in Sverdrup's report is not a valid sample of discharge to sewer and it should therefore be disregarded for purposes of the PCR.

From the very start of pretreatment, October 31, samples of each batch were analyzed prior to discharge for purpose of confirming compliance. Coincidental with the PCR sampling, on November 22, the analysis of each batch was recorded in a laboratory log to establish a permanent record. A copy of that log is enclosed and from it you will see that there were four batches analyzed and discharged in the latter part of November. I believe that this

C06372

CERRO COPPER PRODUCTS CO.

A member of The Marmon Group of companies

Mr. Carl Schafer  
December 21, 1988  
Page 2


data is appropriate for inclusion in the November PCR, commensurate with the information given in Charles Sutfin's letter of November 10, 1988.

With all three tanks being of equal size, the discharge from each batch is a uniform 6,000 gallons per batch. Effective December 21 the notation in the log will have the actual volume discharged in the right hand column rather than a yes or no comment.

I think the log shows some other interesting information, including a chronology of the two batches that received an overdose of caustic.

Very truly yours,

CERRO COPPER PRODUCTS CO.  
A member of The Marmon Group  
of companies



S. A. Silverstein  
Manager of Energy and  
Environmental Affairs.

SAS/ge

C06373

| DATE               | Tank No | INITIALS | SAMPLE NAME                    | TOTAL CU | PPMS ANALYSIS<br>TOTAL PPD | TOTAL EN | h    | H <sub>2</sub> O | Discharged |
|--------------------|---------|----------|--------------------------------|----------|----------------------------|----------|------|------------------|------------|
| 11-22-88           | 101     | GP       | Decant                         | .5       | .2                         | N/L      | 10.0 |                  | Yes        |
| 1-23-88            | 102     | MHC      | Decant                         | .3       | .25                        | N/L      | 9.5  |                  | Yes        |
| 11-28-88           | 101     | GP       | Decant                         | 1.0      | .1                         | N/L      | 9.6  |                  | Yes        |
| 11-28-88           | 102     | GP       | Decant                         | .8       | .1                         | .1       | 9.4  | 81.8%            | Yes        |
| 11/29/88           | Filter  | JB       | Sludge (exc. H <sub>2</sub> O) |          |                            |          |      |                  |            |
| 12-2-88            | 101     | GP       | Decant                         | 1.0      | .2                         | .1       | 10.1 |                  | Yes        |
| 12-5-88            | 102     | GP       | Decant                         | 29.0     | 45.5                       | 18.5     | 12.1 |                  | No         |
| 12-5-88            | 103     | MHC      | Decant                         | .9       | 3.2                        | .4       | 11.5 |                  | No         |
| 12-5-88            | 102     | MHC      | Decant                         | 1.7      | 55.0                       | 16.0     | 11.9 |                  | No         |
| 12-6-88            | 102     | Greg     | Decant                         | 2.3      | 26.0                       | 3.5      | 12.0 |                  | No         |
| 12-6-88            | 103     | Greg     | Decant                         | 1.1      | 2.2                        | N/L      | 11.4 |                  | No         |
| 12-6-88            | 102     | MHC      | Decant                         | 3.1      | 30.0                       | 4.0      | 11.8 |                  | No         |
| Resubmitted        | 103     | MHC      | Decant                         | .8       | 3.3                        | N/L      | 11.4 |                  | No         |
| 12-8-88            | Debit   | MHC      | Decant                         | .9       | .1                         | N/L      | 9.6  |                  | Yes        |
| 12-9-88 (12-5-88)  | 101     | MHC      | Decant                         | 2.3      | 2.9                        | N/L      | 11.3 |                  | No         |
| 12-9-88 (12-5-88)  | 102     | Greg     | Decant                         | .7       | 1.6                        | .2       | 11.3 |                  | No         |
| 12-9-88 (12-5-88)  | 104     | Greg     | Decant                         | 1.7      | 3.2                        | .4       | 11.3 |                  | No         |
| 12-10-88 (12-5-88) | 102     | Greg     | Decant                         | 1.0      | .3                         | .1       | 10.2 |                  | Yes        |
| 12-10-88 (12-5-88) | 103     | Greg     | Decant                         | 1.3      | .5                         | .3       | 10.0 |                  | Yes        |
| 12-14-88           | 101     | MHC      | Decant                         | 1.0      | .3                         | .1       | 9.3  |                  | Yes        |
| 12-15-88           | 102     | MHC      | Decant                         | .8       | .1                         | .2       | 9.1  |                  | Yes        |
| 12-16-88           | 103     | Greg     | Decant                         | 1.2      | .3                         | .1       | 9.7  |                  | Yes        |
| 12-17-88           | 101     | MHC      | Decant                         | .7       | .2                         | .5       | 8.2  |                  | Yes        |
| 12-20-88           | 102     | MHC      | Decant                         | .5       | .2                         | N/L      | 9.8  |                  | Yes        |

CO6374